

REMARKS

The Applicant has reviewed and fully considered the May 17, 2011 Office Action. Attached herewith is a Request For Continued Examination.

Claims 1-3, 5, 8-10, 13, 15, 18-19, 27 and 28 have been rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 5,008,031 to Schultz *et al.* Applicants respectfully request reconsideration of the rejection. In order for a rejection to be proper under 35 U.S.C. 102(b) the cited prior art must disclose all of the limitations of rejected claim. Schultz fails to disclose all of the limitations of independent claims 1, 18, 27 and 28.

The office action states that the Schulz *et al* 12.0 wt% Na-alkylbenzene sulfonate (anionic surfactant) reads on Applicants' emulsifier.

However, no reference is made in the Schulz *et al* patent to a specific use of an anionic surfactant as an emulsifier or to its specific use to emulsify the organic solvents. This is clearly, based on the assumption that all surfactants are emulsifiers. This incorrect assumption is then extended to imply that its purpose is to emulsify the solvent system, as required in Applicants' invention. Applicants respectfully contends the Schultz 12.0 wt % Na-alkylbenzene sulfonate does not read on Applicants' emulsifying agent for emulsifying the mineral oil.

In addition, the office action states that the Schultz *et al* 12.6 wt% fatty alcohol-ethoxylate (nonionic surfactant) reads on Applicants' emulsifier. However, the Schultz *et al* patent is silent as to the specific use of the nonionic surfactant as an emulsifier or to its specific use to emulsify the organic solvents. Again, the office action merely assumes that all surfactants are emulsifiers and further assumes that its purpose would then be to emulsify the solvent system, since that is what is required in Applicants' invention. Applicants respectfully disagree that the Schultz 12.6 wt % fatty

alcohol-ethoxylate reads on Applicants' emulsifying agent for emulsifying the mineral oil.

Further, the office action contends that the Schulz 0.5 wt% methyl cellulose states that suitable anti-greying agents are cellulose ethers, such as carboxymethylcellulose, methylcellulose, hydroxyalkylcellulose, and mixed ethers such as methylhydroxyethylcellulose, methylhydroxypropylcellulose and methylcarboxymethylcellulose (see Column 3, lines 63-68). The Schultz *et al* patent is silent as to the use of a gelling agent. Therefore, no reference is made to a specific use of cellulose ethers as a gelling agent.

Applicants respectfully disagree that the Schulz *et al* anti-greying agents reads on Applicants' gelling agent. Because the Schulz *et al* patent claims to prepare anhydrous liquid detergents, the function of the cellulose ether cannot be to gel the system.

Applicants sincerely believe that not all of the claimed elements of Applicants' invention are disclosed in the cited reference.

Claims 2-3, 5, 8-10, 13, 15, 18 and 28 all depend from one of the four independent claims as such they include all of the limitations found in the independent claims. Thus the foregoing arguments would also apply to the allowance of these dependent claims.

The Level of Ordinary Skill in the Art

A person with ordinary skills in the art would understand that cellulose ethers are not compatible with organic paraffinic hydrocarbons and do not gel anhydrous systems. Applicants' gelling agent is soluble in anhydrous hydrocarbons and specifically functions as a gelling agent for anhydrous hydrocarbon systems.

Clearly, the Examiner and Applicants have a different understanding of the level of one skilled in the art of detergents, therefore, Applicants respectfully requests evidence showing why a

skilled person in the art would utilize the cellulose ethers in the Schulz *et al* patent for a gel in anhydrous system, as used in Applicants' invention.

Applicants sincerely believe that a person skilled in the art would not have chosen cellulose ethers as a gelling agent in an anhydrous system.

Differences Between the Claimed Invention and the Prior Art

Applicants' invention teaches the use of a low polarity mineral oil as the single component to act as a carrier and to be capable of forming advantageously an anhydrous gel that surprisingly shows good soil removing performance in automatic dishwashing formulations, performance that would not be predicted by the rational of the Schulz *et al* patent.

In the Schulz *et al* patent, the use of a mixed solvent is shown to be necessary in the laundry application to obtain the desired characteristics of detergent performance and to confer the viscosity properties and rate of dissolution compared with prior art anhydrous liquid detergents containing polyglycols (column 1, lines 1-45).

Further, in the Schulz *et al* patent the paraffin oil requires the inclusion of the higher polarity cosolvents to function as an aid to detergency, which is the inventive step over prior art Ref. Table 1, comparing a formulation containing paraffin oil/dibutyl phthalate with the prior art formulation containing polygdiol 300 (a polyglycol).

The Schulz *et al* patent does not at any point identify the need for a gelling agent to gel the organic solvent mix.

Prior Art Teaches Away From Applicants' Invention

The purpose of introducing a mixture of low and medium to high polarity organic solvents to the formulation in the Schulz *et al* patent is to specifically improve the detergency of the formulation in the washing of fabrics, to ensure that the product has a high speed of dissolution (not emulsification) and to lower the viscosity of the products, which is opposite to Applicants gelling the system and, therefore, teaches away from Applicants' invention.

Applicants' invention indicates the use of a single, low polarity solvent giving unexpectedly enhanced detergency in dishwashing applications.

The Schulz *et al* patent indicates the novelty and necessity of using a solvent mixture to gain the claimed improvements. A mixture of low polarity and medium to high polarity solvents is necessary to ensure dissolution of the solvent mixture. The use of low polarity solvent alone, as used in Applicants' invention, would not give complete dissolution of the product, nor would it show the improvements claimed in washing efficiency.

However, use of single organic solvents, either low polarity or medium-to high polarity, is not demonstrated or suggested in the Schulz *et al* patent.

Applicants sincerely believe that: (1) not all of the claimed components are found in the Schulz *et al* patent; (b) the Schulz *et al* patent does not disclose Applicants invention; (c) a person skilled in the art would not have chosen cellulose ethers out of all of the components as a gelling agent; and (d) issuance of Applicants' claims would not preclude the public from purchasing detergents as claimed in the Schulz *et al* patent.

Applicants, therefore, sincerely believe that claims 1-3, 5, 8-10, 13, 15, 18-19, 27 and 28 are novel over the Schulz *et al* patent and respectfully request reconsideration of the rejection.

Claims 11 and 14 are rejected under 35 USC 103(a) as being unpatentable over Schulz *et al*. For a 103 rejection to be proper, the cited references must disclose or suggest all the limitations of the Applicant's claim. *See In re Royka*, 490 F.2d 981 (CCPA 1974) (holding that a proper § 103 rejection requires that the prior art teach all of the claim limitations); *see also Ex parte Wada*, BPAI 2007-3733 at 7. (Jan. 14, 2008) (a post-KSR decision citing *In re Royka* and other Federal Circuit cases holding that obviousness requires a suggestion of all limitations in a claim). Because the cited prior art fails to disclose all the limitations of Claims 11 and 14 this obviousness rejection is improper.

Claims 11 and 14 depend from independent Claim 1, as such they contain all of the limitations of Claim 1.

The office action states at page 3 that:

Schulz teaches that the paraffin hydrocarbons have 8 to 40 carbon atoms. The cellulose ether is present in the composition in an amount up to about 0.5 weight. Schulz however fails to specifically disclose a gelling agent (*i.e.*, cellulose ether) in an amount between 1-10%, and the paraffin having 20-28 carbon atoms.

As stated above, the Schulz *et al* cellulose ether does not function as a gelling agent but as an anti-greying agent. Therefore, the Schulz *et al* patent does not disclose a gelling agent in any amount.

As stated above, the low polarity hydrocarbon of Schulz requires admixture with medium to high polarity organic liquids to provide the inventive step and is not used as a sole component, as in Applicants' invention. Therefore, the discussion about the number of carbon atoms in the paraffin oil is moot, since in Applicants' invention a low polarity mineral oil is used as the single component to act as a carrier and which is also capable of forming an anhydrous gel.

The office action states on Page 5, beginning at line 8, that:

With respect to the number of carbon atoms in the paraffin oil, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to select a portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results.

Applicants respectfully rebut the prima facie case of obviousness because Applicants' invention shows unexpected results.

Unexpected Results

Applicants' invention teaches the use of a low polarity mineral oil as the single component to act as a carrier. In one embodiment, at least 20% of the composition is mineral oil, *i.e.* the carrier, and includes at least one emulsifying agent for emulsifying the mineral oil in an amount between 1-10% of the final composition.

Since oil is a component that many applications, such as cleaning processes, are trying to remove, the provision of oil in the carrier system provides an unexpected technical result in that the overall detergency of the system is not noticeably reduced by the presence of the mineral oil carrier.

The gelling agent provides stability of the composition to allow particular matter to be adequately suspended for prolonged periods of time.

Further, because Applicants provide a non-aqueous carrier component in the composition in the form of mineral oil, an aqueous sensitive agent contained in the composition is stabilized until such time as the oil is sufficiently distributed in the cleaning process to allow activation of the water sensitive agent by water used in the process.

In addition, because Applicants' invention allows the dispersion and suspension of the water sensitive components in an inert medium, *i.e.* the mineral oil, no encapsulation techniques or multiple compartments are required to utilize Applicants' product.

Applicants sincerely believe that range of the composition set for in the present invention is critical and produces unexpected results.

For the foregoing reasons Applicants respectfully request the rejection of Claims 11 and 14 under 35 USC 103(a) as being unpatentable over Schulz *et al* be withdrawn.

Claims 1-5, 7-11, 13-15, 18-19 and 25-28 are rejected under 35 USC 103(a) as being unpatentable over Smith *et al.* (U.S. Patent Publication No. 2002/0142930). The office action stated on Page 6 that:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have prepared a unit dose single compartment containing a composition which comprises bleach, enzyme, mineral oil, nonionic surfactant and gelling agent in their optimum proportions because the teachings of Smith encompass these components and proportions thereof. As to optimization results, a patent will not be granted based upon the optimization of result effective variable when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness.

Applicants believe that the claimed range of the inventive composition is critical and therefore respectfully rebuts the prima facie case of obviousness.

Unexpected Results

Applicants' invention teaches the use of a low polarity mineral oil as the single component to act as a carrier. In one embodiment, at least 20% of the composition is mineral oil, *i.e.* the carrier, and includes at least one emulsifying agent for emulsifying the mineral oil in an amount between 1-10% of the final composition.

Since oil is a component that many applications, such as cleaning processes, are trying to remove, the provision of oil in the carrier system provides an unexpected technical result in that the overall detergency of the system is not noticeably reduced by the presence of the mineral oil carrier. The gelling agent provides stability of the composition to allow particular matter to be adequately suspended for prolonged periods of time.

Further, because Applicants provide a non-aqueous carrier component in the composition in the form of mineral oil, an aqueous sensitive agent contained in the composition is stabilized until such time as the oil is sufficiently distributed in the cleaning process to allow activation of the water sensitive agent by water used in the process.

Because Applicants' invention allows the dispersion and suspension of the water sensitive components in an inert medium, *i.e.* the mineral oil, no encapsulation techniques or multiple compartments are required to utilize Applicants product.

Applicants sincerely believe that range of the composition is critical and produces unexpected results.

Advantages of Applicants invention are that the cost or time associated with encapsulation of the product or creation of multiple components are not incurred.

Additional advantages of Applicants' composition are that it has an increased shelf life and the user does not have to directly handle the ingredients contained in the composition.

The Level of Ordinary Skill in the Art

Applicants believe that a person of ordinary skill in the art of detergents would know that the preferred anti-redeposition polymers listed in Smith at Paragraph 0067 would not behave as gelling agents in the presence of mineral oil, as used in Applicants' invention.

Applicants respectfully requests evidence that a person skilled in the art would utilize the teachings of the Smith publication to arrive at Applicants' use of a gelling agent.

Applicants believe that a person of ordinary skill in the art of detergents would know that mineral oil does not meet the solubility requirements as set forth in Smith at Paragraphs 0017 and 0018.

Smith teaches only to the use of paraffin (which is a mineral oil) as a corrosion inhibitor.

Applicant believes that a person skilled in the art would not consider using mineral oil as the carrier agent for the composition based on the teachings of the Smith publication.

The office action has not provided any evidence or any reason as to why the ordinary artisan would have picked mineral oil as a carrier agent out of all of the components found in the prior.

Applicants sincerely believe that: (1) not all of the claimed components are found in the Smith publication; (b) Applicants invention is not taught or suggested in the Smith publication; (c) a person skilled in the art would not have chosen anti-redeposition polymers out of all of the

components as a gelling agent in the presence of mineral oil; and (d) issuance of Applicants' claims would not preclude the public from purchasing the product as claimed in the Smith publication.

For the forgoing reasons the Applicant respectfully requests the rejection of Claims 1-5, 7-11, 13-15, 18-19 and 25-28 under 35 USC 103(a) as being unpatentable over Smith *et al.* be withdrawn.

Claim 12 is rejected under 35 USC 103(a) as being unpatentable over Smith and further in view of MacQueen *et al.* (U.S. Patent No. 6,268,466). Claim 12 depends from Claim 1 as such it contains all of the limitations of Claim 1.

Page 7 of the Office Action states that:

"it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the gelling agent of Smith with the tertiary amide terminate polyamide gelling agent of MacQueen because the substitution of one gelling agent for another is likely to be obvious when it does no more than yield predictable results"

As previously stated, the function of the cellulose ether in the Schulz *et al* patent cannot be to gel a system and the preferred anti-redeposition polymers listed in Smith at Paragraph 0067 would not behave as gelling agents in the presence of mineral oil.

Therefore, since neither of the cited references disclose a gelling agent that would behave as Applicants', no possible substitutions found in the cited reference could yield predictable results that would lead to the gelling agent as claimed in Applicants' invention.

Therefore, there would be no reason to modify either of the cited references to obtain Applicants' claimed composition.

For the forgoing reasons the Applicant respectfully requests the rejection of Claim 12 under 35 USC 103(a) as being unpatentable over Smith and further in view of MacQueen *et al* be withdrawn.

Conclusion

A serious effort has been made to respond to the Examiner's rejections and place the application in condition for allowance. The claims have been amended to more closely state the intent of the Applicant as defined in the remarks above. The Applicant requests to schedule an interview with Examiner Douyon to resolve any remaining issues.

The Examiner is hereby requested to charge or refund Deposit Account No. 50-1971 for any fees associated with this response.

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Respectfully submitted,



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